FIG. 1

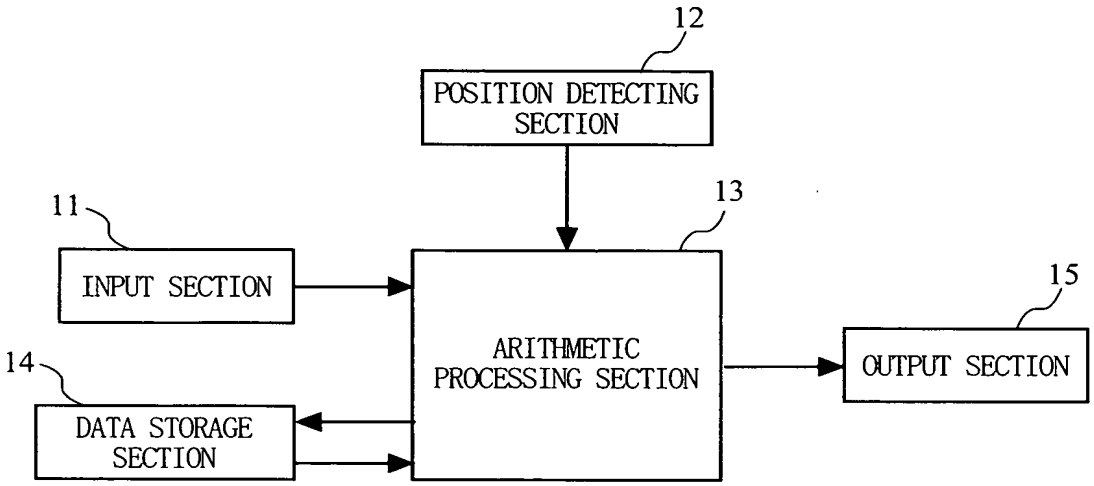

12
POSITION DETECTING SECTION
11
INPUT SECTION
13
ARITHMETIC PROCESSING SECTION
15
OUTPUT SECTION
14
DATA STORAGE SECTION

FIG. 2

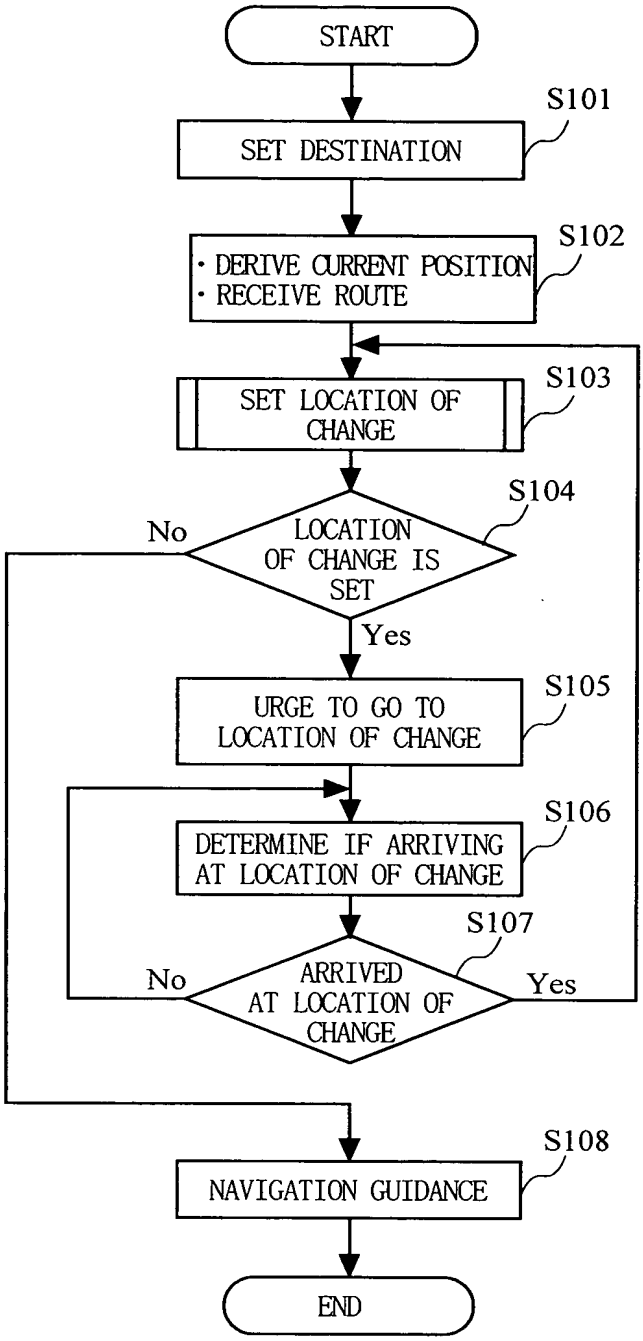

START
S101
SET DESTINATION
S102
· DERIVE CURRENT POSITION
· RECEIVE ROUTE
S103
SET LOCATION OF CHANGE
S104
No
LOCATION OF CHANGE IS SET
Yes
S105
URGE TO GO TO LOCATION OF CHANGE
S106
DETERMINE IF ARRIVING AT LOCATION OF CHANGE
S107
No
ARRIVED AT LOCATION OF CHANGE
Yes
S108
NAVIGATION GUIDANCE
END

FIG. 3

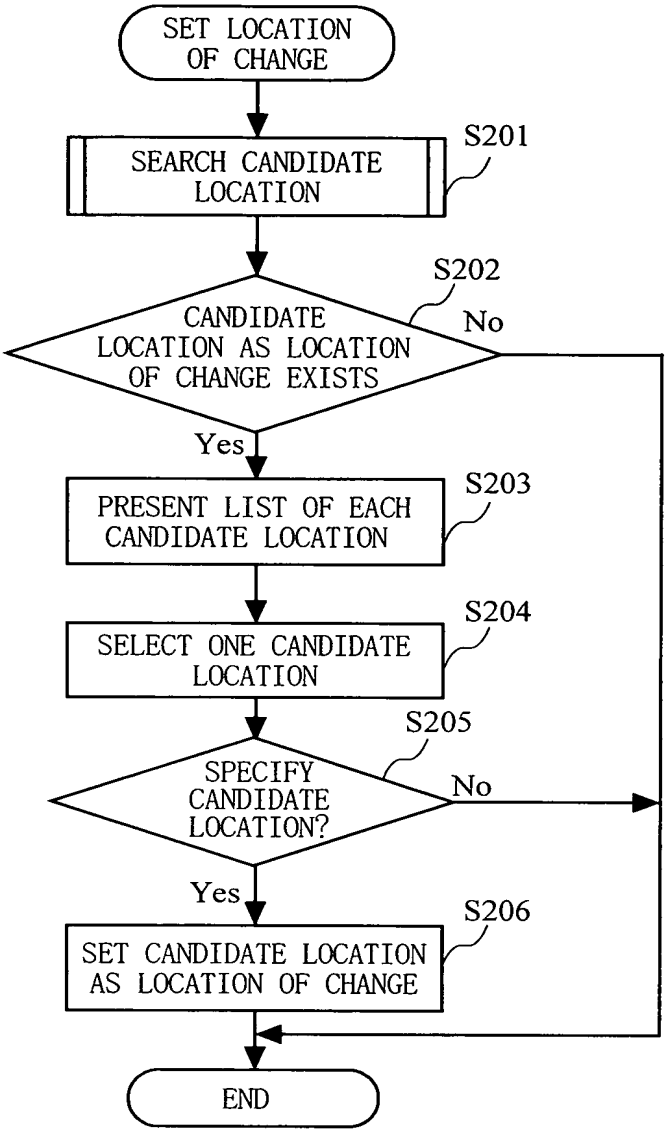

SET LOCATION OF CHANGE
SEARCH CANDIDATE LOCATION
S201
CANDIDATE LOCATION AS LOCATION OF CHANGE EXISTS
S202
No
Yes
PRESENT LIST OF EACH CANDIDATE LOCATION
S203
SELECT ONE CANDIDATE LOCATION
S204
SPECIFY CANDIDATE LOCATION?
S205
No
Yes
SET CANDIDATE LOCATION AS LOCATION OF CHANGE
S206
END

FIG. 4

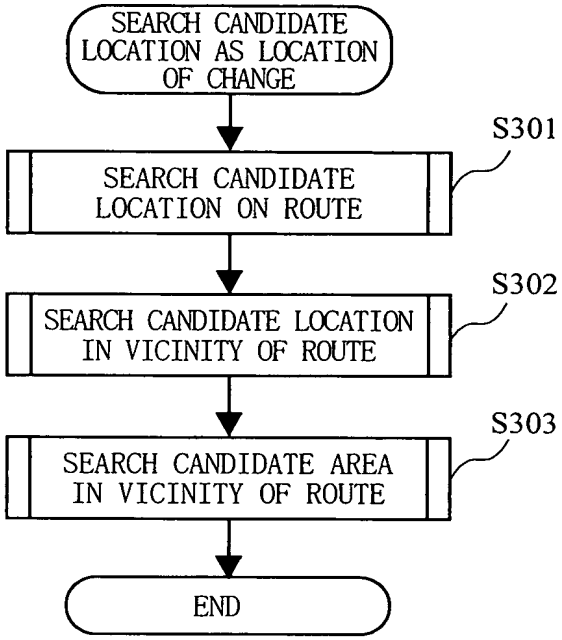

SEARCH CANDIDATE LOCATION AS LOCATION OF CHANGE
S301
SEARCH CANDIDATE LOCATION ON ROUTE
S302
SEARCH CANDIDATE LOCATION IN VICINITY OF ROUTE
S303
SEARCH CANDIDATE AREA IN VICINITY OF ROUTE
END

FIG. 5

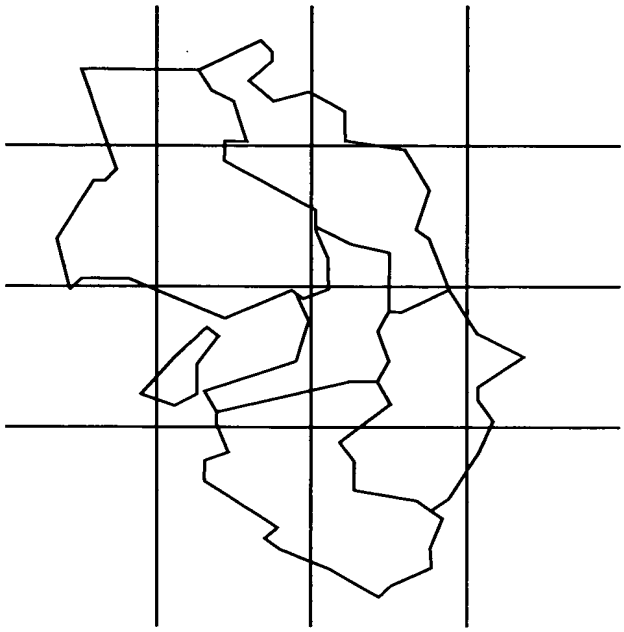
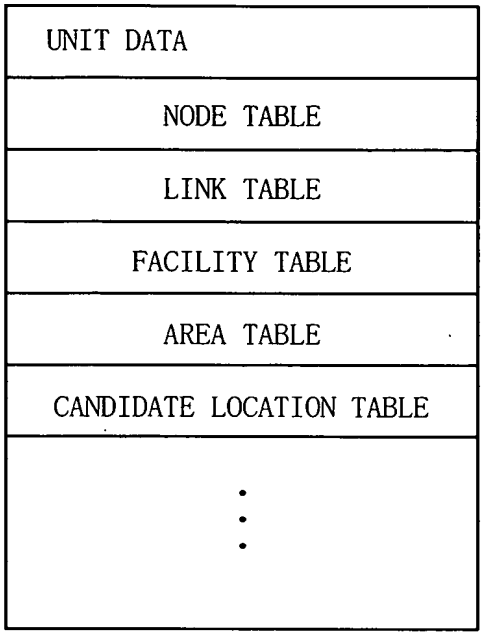


FIG. 6


UNIT DATA
NODE TABLE
LINK TABLE
FACILITY TABLE
AREA TABLE
CANDIDATE LOCATION TABLE

F I G. 7

NODE TABLE			
NODE NUMBER	COORDINATES	CONNECTING LINK NUMBER	NAME
N1	x1 , y1	L1 , L3 , L5	○○ INTERSECTION
N2	x2 , y2	L1 , L2	△△ INTERSECTION
N3	x3 , y3	L2 , L4 , L8	×× INTERSECTION
N4	x4 , y4	L3 , L6 , L19	▲▲ INTERSECTION
N5	x5 , y5	L6 , L7	□□ HIGHWAY, ○○ INTERCHANGE
⋮	⋮	⋮	⋮

FIG. 8

LINK TABLE				
LINK NUMBER	START END NODE NUMBER	TERMINAL END NODE NUMBER	LINK LENGTH	FACILITY/ AREA NUMBER
L1	N1	N2	100	T1 , T2
L2	N2	N3	125	T3
L3	N1	N4	56	T4
L4	N3	N7	120	—
L5	N1	N6	30	T5 , T6 , E3
⋮	⋮	⋮	⋮	⋮

FIG. 9

FACILITY TABLE			
FACILITY NUMBER	COORDINATES	CATEGORY INFORMATION	NAME
T1	x1 , y1	U1	○○ CITY HALL
T2	x2 , y2	U2	○○ POST OFFICE
T3	x3 , y3	U3	○○ ELEMENTALLY SCHOOL
T4	x4 , y4	U3	△△ ELEMENTALLY SCHOOL
T5	x5 , y5	U3	×× ELEMENTALLY SCHOOL
⋮	⋮	⋮	⋮

FIG. 10

AREA TABLE			
AREA NUMBER	REGION INFORMATION	SIZE INFORMATION	NAME
E1	XY1 , XY2 , XY3 , ··· , XY12	V1	○○○
E2	XY13 , XY14 , ··· , XY22	V1	×××
E3	XY23 , XY24 , ··· , XY28	V2	△△△
⋮	⋮	⋮	⋮

FIG. 11

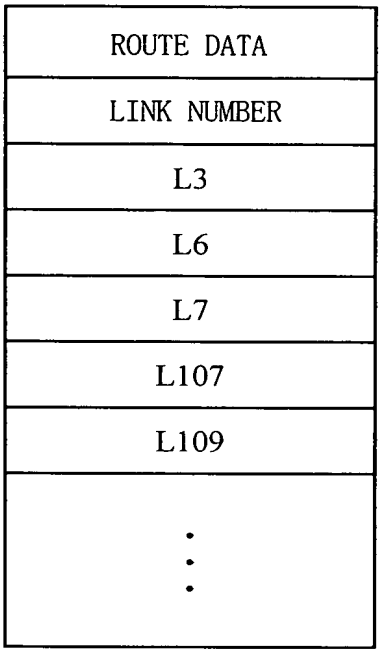


FIG. 12

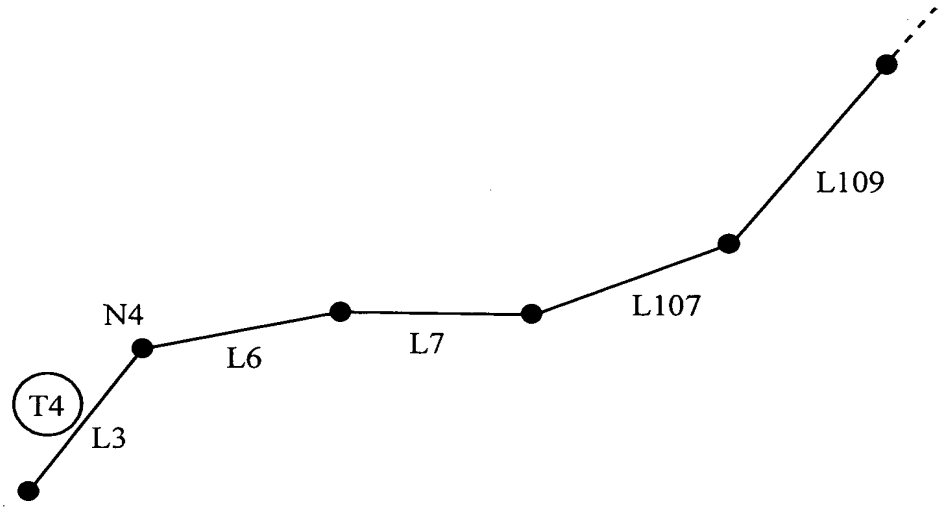


FIG. 13

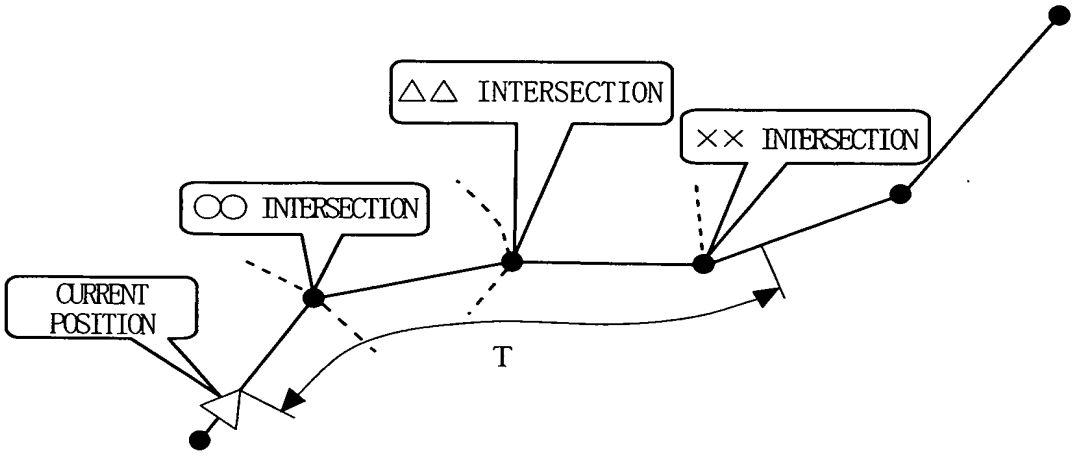

△△ INTERSECTION
×× INTERSECTION
○○ INTERSECTION
CURRENT POSITION
T

FIG. 14

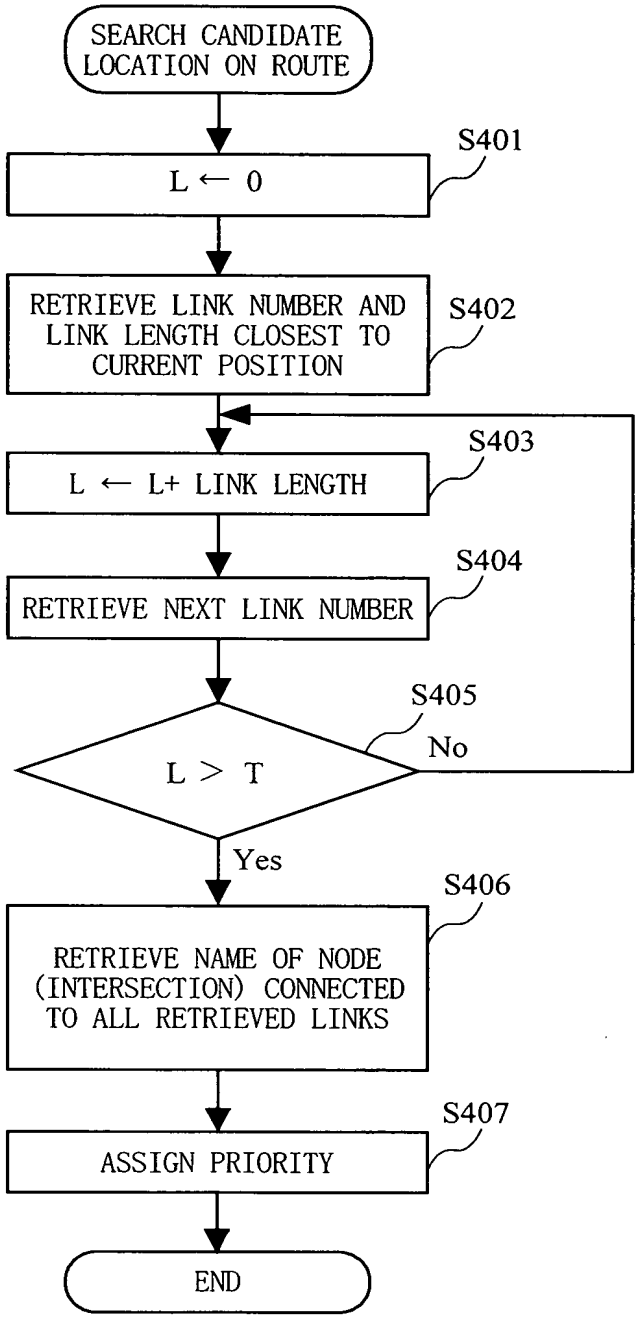

SEARCH CANDIDATE LOCATION ON ROUTE
S401
L ← 0
RETRIEVE LINK NUMBER AND LINK LENGTH CLOSEST TO CURRENT POSITION
S402
S403
L ← L+ LINK LENGTH
S404
RETRIEVE NEXT LINK NUMBER
S405
L > T
No
Yes
S406
RETRIEVE NAME OF NODE (INTERSECTION) CONNECTED TO ALL RETRIEVED LINKS
S407
ASSIGN PRIORITY
END

FIG. 15

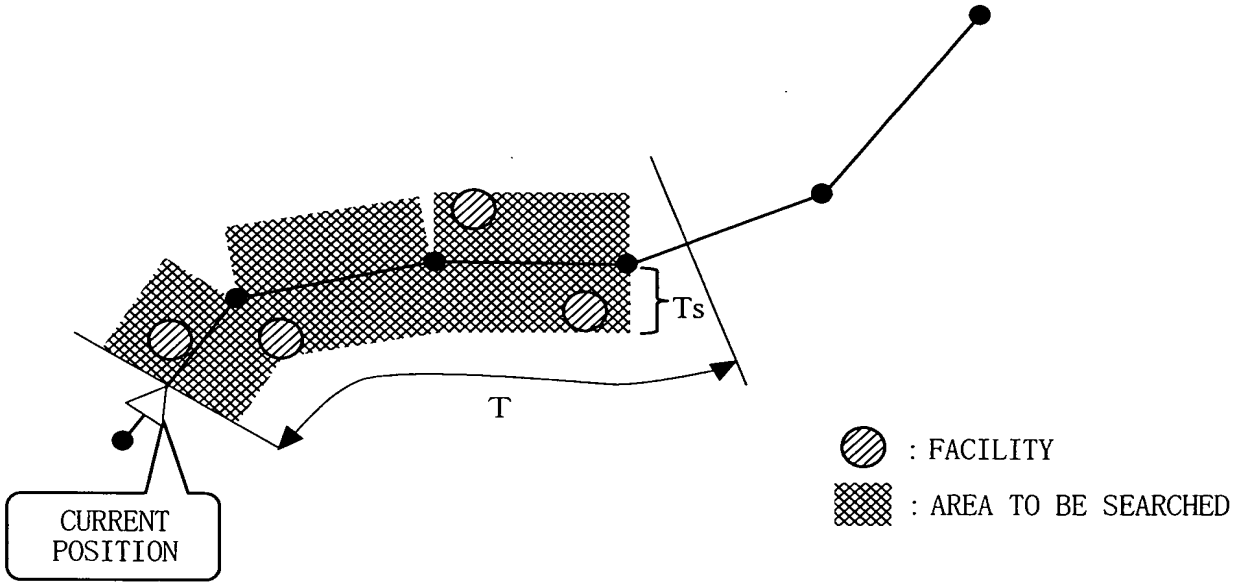


FIG. 16

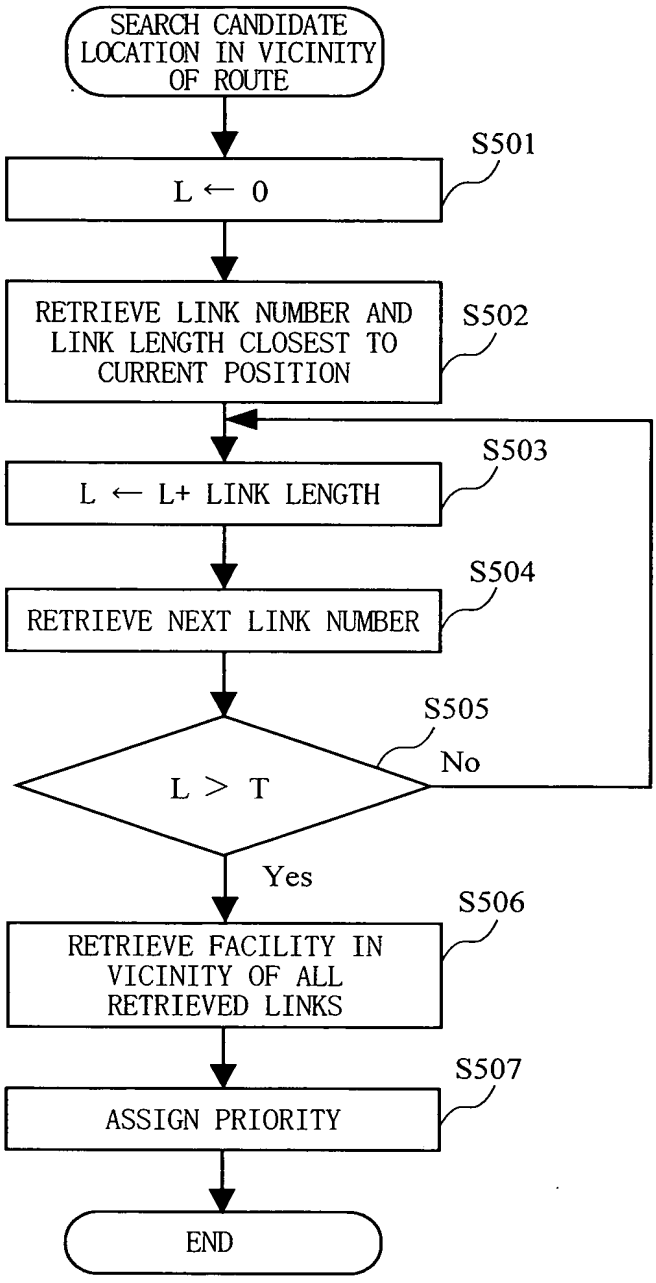

SEARCH CANDIDATE LOCATION IN VICINITY OF ROUTE
S501
L ← 0
RETRIEVE LINK NUMBER AND LINK LENGTH CLOSEST TO CURRENT POSITION
S502
S503
L ← L+ LINK LENGTH
S504
RETRIEVE NEXT LINK NUMBER
S505
L > T
No
Yes
S506
RETRIEVE FACILITY IN VICINITY OF ALL RETRIEVED LINKS
S507
ASSIGN PRIORITY
END

FIG. 17

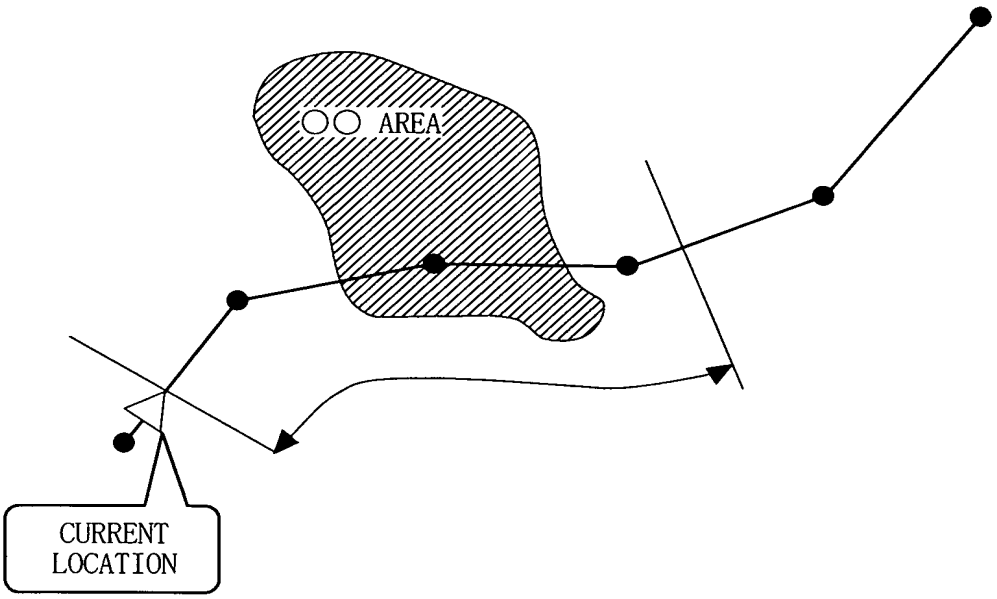


FIG. 18

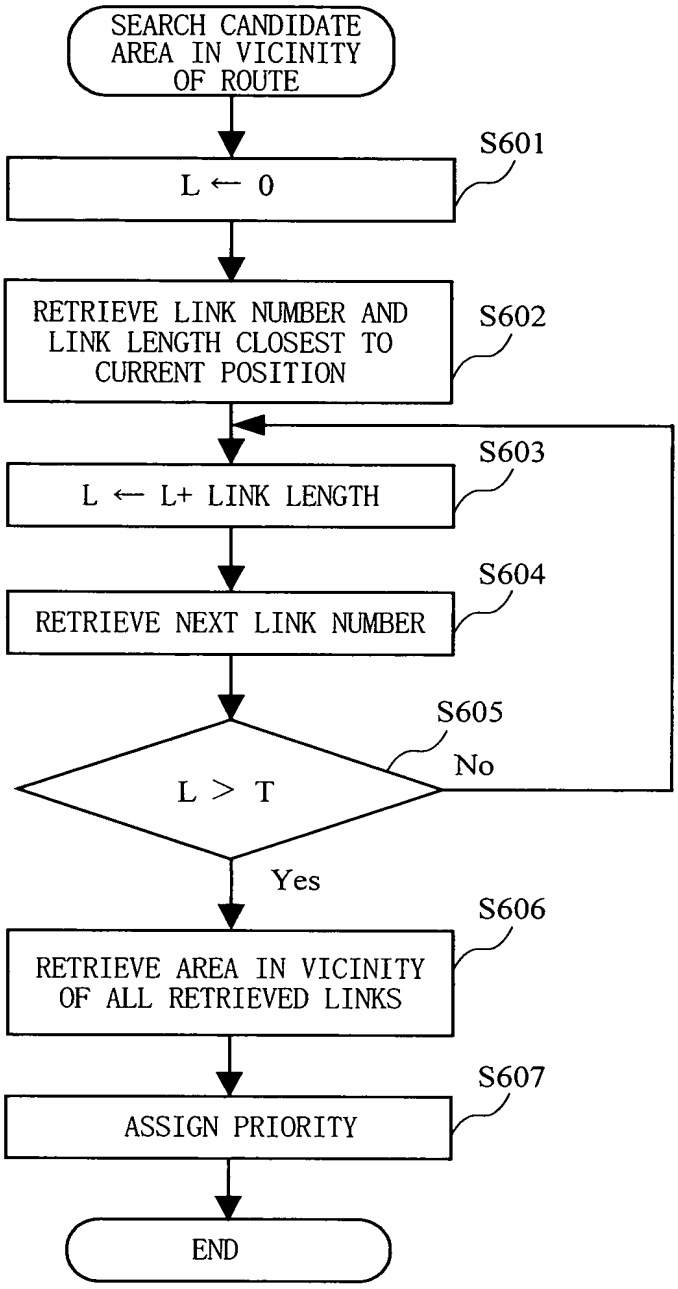

SEARCH CANDIDATE AREA IN VICINITY OF ROUTE
S601
L ← 0
RETRIEVE LINK NUMBER AND LINK LENGTH CLOSEST TO CURRENT POSITION
S602
S603
L ← L+ LINK LENGTH
S604
RETRIEVE NEXT LINK NUMBER
S605
L > T
No
Yes
S606
RETRIEVE AREA IN VICINITY OF ALL RETRIEVED LINKS
S607
ASSIGN PRIORITY
END

FIG. 19

CANDIDATE LOCATION TABLE
U1 , U2 , U3 , U5 , U9 , V1 , V2 , V4